

NOAA Award No. NA16FZ2963
A Public Education and Outreach Campaign on Coral Reefs and Climate Change
Final Report
Submitted by the National Wildlife Federation
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With a \$55,000 grant from the National Oceanic and Atmospheric Administration (NOAA), the National Wildlife Federation (NWF) has successfully developed an ongoing, strategic education and outreach campaign to build greater public awareness of the threat that global climate change and other environmental problems pose to coral reefs in the U.S. and around the world and provide concerned citizens with knowledge and tools to help protect them for current and future generations.

Through this campaign, NWF is directly supporting the efforts of the U.S. Coral Reef Task Force to accomplish its “critical conservation strategy” to reduce global threats such as climate change (Strategy 6 of the March 2000 *National Action Plan to Conserve Coral Reefs*) by creating an informed public. The following describes our accomplishments over the grant period (October 1, 2002 – January 31, 2004):

1. Interactive DVD, “Coral Reefs: Canaries of the Sea”

A primary goal of this project was to develop a set of targeted, interactive educational materials highlighting the current state of knowledge of global climate change, how it is likely to affect coral reefs both here in the U.S. and around the world, and what people can do to protect coral reefs from this and other threats. Toward this end, NWF successfully completed an interactive DVD (originally envisioned as a CD-ROM and video in the grant proposal) that provides:

- An overview of the splendor of coral reefs, from the many ocean species they support to the benefits they provide for people;
- Information about current threats to reefs (including coastal development, pollution, over-fishing, and harmful fishing activities) and what people can do to help protect coral reefs from these more “localized” threats;
- An overview section on global warming and associated climate change;
- Information about how climate change is affecting coral reefs and the ecosystems they support (including higher temperatures and coral bleaching, coral diseases, sea-level rise, more severe storms, and elevated carbon dioxide levels); and
- Ideas about what people can do to help protect reefs, such as volunteering with organizations that help clean up coastal areas and watersheds and encouraging strategies to reduce the pollution that is contributing to climate change.

A copy of this DVD is enclosed as Attachment A. To date, NWF has distributed more than 6000 copies of the DVD, free of charge, to a broad range of stakeholders, including:

Divers and Snorkelers

A key target for this outreach and education campaign is the recreational diving community, which encompasses millions of people across the country. We have provided more than 3,500 DVDs to dozens of dive shops for distribution to their club members and customers, and we continue to receive additional requests weekly. We have reached beyond just coastal communities in places like Florida, California, and Hawaii. Requests (so far) have also come from dive shops in Alaska, Washington, Idaho, Montana, North Dakota, Nevada, Colorado, New Mexico, Texas, Arkansas, Kansas, Missouri, Illinois, Louisiana, Tennessee, Virginia, North Carolina, South Carolina, Georgia, Ohio, Michigan, Minnesota, Wisconsin, Rhode Island, and New York. Several of these dive shops have subsequently indicated an interest in getting more involved in the education campaign in the months to come, including organizing workshops, tabling at public events, and distributing additional materials.

Zoo and Aquarium Visitors

Through announcements of the availability of the DVD in the American Zoo and Aquarium Association's member newsletter and NOAA's memorandum to marine educators, NWF has received requests for the DVD for distribution to visitors and incorporation into interpretive displays at a number of zoos, aquariums, parks, and marine sanctuaries, including:

The Columbus Zoo and Aquarium
The Toledo Zoo
Seneca Park Zoo
Montgomery Zoo
John G. Shedd Aquarium
Kauai Children's Discovery Museum
Waikiki Aquarium
Bishop Museum in Honolulu
Fagatele Bay National Marine Sanctuary in American Samoa
The Museum of Coastal Carolina
National Park of American Samoa
Hawaii Humpback Whale National Marine Sanctuary
The Ding Darling National Wildlife Refuge
The Florida Keys National Marine Sanctuary
Flower Garden Banks National Marine Sanctuary
The Great Barrier Reef Marine Park Authority
California State Parks San Diego Coast District

State, National, and International Government Agencies, Universities, and Schools

In addition to providing numerous copies of the DVD to NOAA offices across the country, NWF has received requests from marine educators, scientists, and other interested parties at government agencies, universities, and schools in the U.S. and abroad, including:

The Office of the Governor of the Commonwealth of the Northern Mariana Islands
Florida Department of Environmental Protection

Virgin Islands CZM
San Diego Coast District
North Carolina Wildlife Resources Commission
The Department of Environmental Quality in Guam
Natural Resource Conservation Service in Palau
Yap State Marine Resources and Management
U.S. EPA, FWS, National Park Service, and USGS offices
The World Bank
Smithsonian Institution Marine Sciences Program
The University of Georgia
The University of South Florida
The University of Hawaii
The University of Exeter (England)
The University of Guam
The University of Puerto Rico
The University of Maryland
The University of Mississippi
The University of Alabama
The University of North Carolina – Greensboro
Campbell University
Stanford Graduate School of Business
Santa Rosa Junior College
Maysville Community College
University of North Carolina – Greensboro
College of Charleston
Campbell University
Maui Community College
Prince George's Community College
Metropolitan State College of Denver
Maysfield Community College
Viewpoint School (California)
McKinley Senior High School (Ohio)
Durant Road Middle School (North Carolina)
South Milwaukee Middle School (Wisconsin)
Socastee High School (South Carolina)
Boyertown Area School District (Pennsylvania)
Fredonia High School (New York)
Allegan County Math & Science Center (Michigan)
Lincoln Middle School (Pennsylvania)
Dakota Ridge High School (Colorado)
Putnam Middle School (Connecticut)
Centennial School (Illinois)
Wilmington Christian School (Maryland)
Oakland Schools Technical Campus (Michigan)
Hebron High School (Texas)

Bonita Springs School (Florida)
Beach School (California)

NWF Members and Other NGOs

NWF has received hundreds of requests for the DVD from its members, based on announcement of its availability in the April/May 2004 edition of NWF's magazine, *National Wildlife* [[Attachment B](#)]. In addition, a number of other non-governmental organizations have requested copies of the DVD to use as an educational tool for their own constituencies. These include:

Living Oceans Society (in B.C., Canada)
The Nature Conservancy
World Wildlife Fund
National Coral Reef Institute
The Wildlife Conservation Society
Ocean Futures Society
Worldfish Center
Marine Aquarium Council
PADI's Project AWARE
The Coral Reef Alliance
The Ocean Conservancy
Save Our Seas in Hanalei, HI
CORDIO East Africa
Reef Environmental Education Foundation
The Conservation Society of Pohnpei
Greenpeace International
Oceans for Youth Foundation

2. Monitoring Tools for Divers

As part of this project, NWF provided support to Reef Check, the United Nations' official community-based reef monitoring program, to develop new color underwater ID cards to help their teams of volunteer divers around the world identify broad environmental damage to coral reefs, including major bleaching events and diseases [[Attachment C](#)]. This information, along with continued monitoring of "indicator" species in both the Atlantic and Pacific regions, will not only help promote a sense of environmental stewardship within communities by enabling people to feel engaged in protecting the ecosystems that they enjoy, but it will also contribute to relevant international coral reef monitoring and conservation efforts (including the Global Coral Reef Monitoring Network, the International Coral Reef Initiative, and the International Coral Reef Action Network).

3. Interactive Display

With technical and financial support from NWF, MacGillivray Freeman Films produced an interactive lobby display on threats to coral reefs, to be used as a companion to screenings of the IMAX film *Coral Reef Adventure* [Attachment D]. This film, which features researchers Howard and Michele Hall, provides viewers with an important and highly entertaining look at the threats facing coral reefs in Australia, Fiji, and around the world. *Coral Reef Adventure* is currently being shown at 36 large-screen theaters across the country, 14 of which include the lobby display.

4. Additional Outreach Activities

In addition to the above-mentioned activities, NWF has provided information on coral reefs to its members and the public through feature stories in *National Wildlife* and *Ranger Rick* magazines as well as on the NWF Web site. For example, in the April 2003 edition of *Ranger Rick*, NWF published the feature “Lights! Camera! Dive!” which provided an overview of the *Coral Reef Adventure* film and linked readers to additional information about climate change and other threats to coral reefs at “Ranger Rick’s Go Wild” Web page [Attachment E].

Since the end of the grant period, NWF has continued to use the educational materials developed under this project to bring the message about coral reefs and climate change to a broad range of relevant stakeholders across the country. Among other things, NWF organized a scientific panel on coral reefs and climate change as part of the U.S. Coral Reef Task Force meeting February 24-25 in Washington, D.C. NWF has also conducted outreach to the outdoors/travel media, which has culminated in several articles to date (Attachment F). In addition, we are currently seeking funding to translate the DVD into Spanish to broaden our outreach possibilities internationally.

5. List of Attachments:

Attachment A: *Coral Reefs: Canaries of the Sea* DVD
Attachment B: Notice in April/May 2004 edition of *National Wildlife*
Attachment C: Copy of Reef Check’s new diver identification cards
Attachment D: Visual of the *Coral Reef Adventure* lobby display
Attachment E: Copy of April 2003 *Ranger Rick* feature
Attachment F: Various news articles

6. Project Contact Information

Patricia Glick
Climate Change and Wildlife Program Coordinator
National Wildlife Federation
1400 Sixteenth Street, N.W., Suite 501
Washington, D.C. 20036
(202) 797-6898 phone
(202) 797-5486 fax
email: glick@nwf.org

Signature _____
Date _____